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* * * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 15:16:59 ON 04 FEB 2010

=> fil .bec
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.22       0.22

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 15:17:29 ON 04 FEB 2010
ALL COPYRIGHTS AND RESTRICTIONS APPLY.  SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s (photoprotein# or aequorin or obelin or  mnemiopsin or phiallidin or
mitrocomin or halistaurin or clytin)(15a)(muta? or variant#)
FILE 'MEDLINE'
           479 PHOTOPROTEIN#
          1556 AEQUORIN
            87 OBELIN
             6 MNEMIOPSIN
             0 PHIALLIDIN
             3 MITROCOMIN
             3 HALISTAURIN
             6 CLYTIN
        663898 MUTA?
        152462 VARIANT#
L1           48 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
                N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
                )

FILE 'SCISEARCH'
           503 PHOTOPROTEIN#
          1510 AEQUORIN
            96 OBELIN
             6 MNEMIOPSIN
             0 PHIALLIDIN
             3 MITROCOMIN
             1 HALISTAURIN
             7 CLYTIN
        661718 MUTA?
        179116 VARIANT#
L2           59 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
                N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
                )

FILE 'LIFESCI'
           210 PHOTOPROTEIN#
           567 AEQUORIN
            27 OBELIN
             1 MNEMIOPSIN
             0 PHIALLIDIN
             2 MITROCOMIN
             1 HALISTAURIN
             5 CLYTIN
        320581 MUTA?
         61115 VARIANT#
L3           25 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
                N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
                )
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FILE 'BIOTECHDS'
            77 PHOTOPROTEIN#
           145 AEQUORIN
            24 OBELIN
             6 MNEMIOPSIN
             0 PHIALLIDIN
             3 MITROCOMIN
             0 HALISTAURIN
            12 CLYTIN
         54258 MUTA?
         19901 VARIANT#
L4          21 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
               N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
               )

FILE 'BIOSIS'
           593 PHOTOPROTEIN#
          1818 AEQUORIN
           119 OBELIN
             5 MNEMIOPSIN
             0 PHIALLIDIN
             4 MITROCOMIN
             2 HALISTAURIN
             8 CLYTIN
        730472 MUTA?
        158947 VARIANT#
L5          64 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
               N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
               )

FILE 'EMBASE'
           532 PHOTOPROTEIN#
          1356 AEQUORIN
            56 OBELIN
             4 MNEMIOPSIN
             0 PHIALLIDIN
             1 MITROCOMIN
             1 HALISTAURIN
             3 CLYTIN
        568094 MUTA?
        134196 VARIANT#
L6          35 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
               N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
               )

FILE 'HCAPLUS'
           764 PHOTOPROTEIN#
          1661 AEQUORIN
           147 OBELIN
            12 MNEMIOPSIN
             0 PHIALLIDIN
            12 MITROCOMIN
             3 HALISTAURIN
            21 CLYTIN
        682003 MUTA?
        153947 VARIANT#
L7          94 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
               N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
               )

FILE 'NTIS'
```

```
            16 PHOTOPROTEIN#
            21 AEQUORIN
             2 OBELIN
             0 MNEMIOPSIN
             0 PHIALLIDIN
             0 MITROCOMIN
             0 HALISTAURIN
             0 CLYTIN
         11072 MUTA?
          5176 VARIANT#
L8           3 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
               N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
               )

FILE 'ESBIOBASE'
           178 PHOTOPROTEIN#
           604 AEQUORIN
            33 OBELIN
             0 MNEMIOPSIN
             0 PHIALLIDIN
             1 MITROCOMIN
             0 HALISTAURIN
             3 CLYTIN
        365733 MUTA?
         72121 VARIANT#
L9          42 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
               N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
               )

FILE 'BIOTECHNO'
           260 PHOTOPROTEIN#
           416 AEQUORIN
            27 OBELIN
             0 MNEMIOPSIN
             0 PHIALLIDIN
             1 MITROCOMIN
             1 HALISTAURIN
             2 CLYTIN
        242571 MUTA?
         41198 VARIANT#
L10         20 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
               N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
               )

FILE 'WPIDS'
           122 PHOTOPROTEIN#
           250 AEQUORIN
            45 OBELIN
            17 MNEMIOPSIN
             0 PHIALLIDIN
            13 MITROCOMIN
             2 HALISTAURIN
            22 CLYTIN
         43447 MUTA?
         39327 VARIANT#
L11         26 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR  MNEMIOPSIN OR PHIALLIDI
               N OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#
               )

TOTAL FOR ALL FILES
L12         437 (PHOTOPROTEIN# OR AEQUORIN OR OBELIN OR MNEMIOPSIN OR PHIALLIDIN
                OR MITROCOMIN OR HALISTAURIN OR CLYTIN)(15A)(MUTA? OR VARIANT#)
```

```
=> s (phiallidin or clytin) and (muta? or variant#)
FILE 'MEDLINE'
             0 PHIALLIDIN
             6 CLYTIN
        663898 MUTA?
        152462 VARIANT#
L13          0 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'SCISEARCH'
             0 PHIALLIDIN
             7 CLYTIN
        661718 MUTA?
        179116 VARIANT#
L14          0 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'LIFESCI'
             0 PHIALLIDIN
             5 CLYTIN
        320581 MUTA?
         61115 VARIANT#
L15          0 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'BIOTECHDS'
             0 PHIALLIDIN
            12 CLYTIN
         54258 MUTA?
         19901 VARIANT#
L16          7 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'BIOSIS'
             0 PHIALLIDIN
             8 CLYTIN
        730472 MUTA?
        158947 VARIANT#
L17          0 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'EMBASE'
             0 PHIALLIDIN
             3 CLYTIN
        568094 MUTA?
        134196 VARIANT#
L18          0 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'HCAPLUS'
             0 PHIALLIDIN
            21 CLYTIN
        682003 MUTA?
        153947 VARIANT#
L19          5 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'NTIS'
             0 PHIALLIDIN
             0 CLYTIN
         11072 MUTA?
          5176 VARIANT#
L20          0 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'ESBIOBASE'
             0 PHIALLIDIN
             3 CLYTIN
```

```
        365733 MUTA?
         72121 VARIANT#
L21          2 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'BIOTECHNO'
             0 PHIALLIDIN
             2 CLYTIN
        242571 MUTA?
         41198 VARIANT#
L22          0 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

FILE 'WPIDS'
             0 PHIALLIDIN
            22 CLYTIN
         43447 MUTA?
         39327 VARIANT#
L23         10 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

TOTAL FOR ALL FILES
L24         24 (PHIALLIDIN OR CLYTIN) AND (MUTA? OR VARIANT#)

=> s (l12 or l24) not 2007-2010/py
FILE 'MEDLINE'
       2199154 2007-2010/PY
L25         35 (L1 OR L13) NOT 2007-2010/PY

FILE 'SCISEARCH'
       4083879 2007-2010/PY
                  (20070000-20109999/PY)
L26         44 (L2 OR L14) NOT 2007-2010/PY

FILE 'LIFESCI'
        696093 2007-2010/PY
L27         18 (L3 OR L15) NOT 2007-2010/PY

FILE 'BIOTECHDS'
         50427 2007-2010/PY
L28         18 (L4 OR L16) NOT 2007-2010/PY

FILE 'BIOSIS'
       1803119 2007-2010/PY
L29         47 (L5 OR L17) NOT 2007-2010/PY

FILE 'EMBASE'
       1832835 2007-2010/PY
L30         26 (L6 OR L18) NOT 2007-2010/PY

FILE 'HCAPLUS'
       4894016 2007-2010/PY
L31         62 (L7 OR L19) NOT 2007-2010/PY

FILE 'NTIS'
         45930 2007-2010/PY
L32          3 (L8 OR L20) NOT 2007-2010/PY

FILE 'ESBIOBASE'
       1072620 2007-2010/PY
L33         32 (L9 OR L21) NOT 2007-2010/PY

FILE 'BIOTECHNO'
             0 2007-2010/PY
L34         20 (L10 OR L22) NOT 2007-2010/PY
```

```
FILE 'WPIDS'
       4739359 2007-2010/PY
L35          9 (L11 OR L23) NOT 2007-2010/PY

TOTAL FOR ALL FILES
L36        314 (L12 OR L24) NOT 2007-2010/PY

=> dup rem l36
PROCESSING COMPLETED FOR L36
L37         105 DUP REM L36 (209 DUPLICATES REMOVED)

=> d tot

L37   ANSWER 1 OF 105  BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI    New photoprotein aequorin Y89F, its functional equivalents and
      corresponding nucleic acids, useful as labels or reporters, especially in
      pharmacological research and diagnostic applications;
         DNA and RNA vector-mediated gene transfer and expression in host cell
         for use as a diagnostic, in pharmacological and pharmaceutical
         industries, for calcium concentration detection, drug screening and
         high throughput screening
AU    GOLZ S; VYSOTSKI E; MARKOVA S; STEPANYUK G; BURAKOVA L; FRANK L
AN    2006-08904  BIOTECHDS
PI    WO 2006010454 2 Feb 2006

L37  ANSWER 2 OF 105  HCAPLUS  COPYRIGHT 2010 ACS on STN DUPLICATE 2
TI   Extending light-emitting time of calcium-binding photoprotein solution.
SO   Brit. UK Pat. Appl., 45pp.
     CODEN: BAXXDU
IN   Inouye, Satoshi; Sasaki, Satoko
AN   2006:1145319  HCAPLUS
DN   145:467722
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   GB 2425535           A     20061101    GB 2006-8514           20060428
     JP 2006308501        A     20061109    JP 2005-133743         20050428
     US 20060246534       A1    20061102    US 2006-411715         20060426

L37   ANSWER 3 OF 105  BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI    Photoprotein useful as an intracellular calcium indicator, is
      obtained by mutagenesis of clytin, is able to bind
      coelenterazine and calcium, and displays enhanced bioluminescence;
         recombinant photoprotein for intracellular calcium indicator,
         cell-based high throughput screening assay, intracellular calcium
         concentration modulating compound screening and diagnosis composition
AU    MASTROIANNI N; CAINARCA S; CORAZZA S
AN    2006-24828  BIOTECHDS
PI    WO 2006094805 14 Sep 2006

L37   ANSWER 4 OF 105  BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI    Novel cell comprising endogenous promiscuous G-proteins and exogenous
      nucleic acid encoding G-protein coupled receptor (GPCR), useful for
      identifying agent that modulates activity of GPCR;
         a recombinant G-protein coupled receptor expressed in a Chinese
         hamster ovary cell useful for the identification of an agonist or
         antagonist
AU    HSU M
AN    2006-13695  BIOTECHDS
PI    WO 2006050214 11 May 2006

L37   ANSWER 5 OF 105  BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
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TI New nucleic acid encoding variant of aequorin, useful e.g. as reporter gene and as dye, has much longer luminescent lifetime than the parent protein, also new encoded proteins; recombinant photoprotein production via plasmid expression in host cell for use in marker and pollutant quantification
AN 2007-01755 BIOTECHDS
PI DE 102005022146 23 Nov 2006

L37 ANSWER 6 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Genetically engineered luminescent proteins in biosensing
SO Proceedings of SPIE-The International Society for Optical Engineering (2006), 6098, 60980H/1-60980H/9
CODEN: PSISDG; ISSN: 0277-786X
AU Rowe, Laura; Ensor, Mark; Scott, Daniel; Deo, Sapna; Daunert, Sylvia
AN 2006:293863 HCAPLUS
DN 145:287941

L37 ANSWER 7 OF 105 MEDLINE on STN DUPLICATE 3
TI Calcium dependence of aequorin bioluminescence dissected by random mutagenesis.
SO Proceedings of the National Academy of Sciences of the United States of America, (2006 Jun 20) Vol. 103, No. 25, pp. 9500-5. Electronic Publication: 2006-06-12.
Journal code: 7505876. ISSN: 0027-8424. L-ISSN: 0027-8424.
Report No.: NLM-PMC1480436.
AU Tricoire Ludovic; Tsuzuki Keisuke; Courjean Olivier; Gibelin Nathalie; Bourout Gaelle; Rossier Jean; Lambolez Bertrand
AN 2006373143 MEDLINE

L37 ANSWER 8 OF 105 MEDLINE on STN DUPLICATE 4
TI Crystal structure of obelin after Ca2+-triggered bioluminescence suggests neutral coelenteramide as the primary excited state.
SO Proceedings of the National Academy of Sciences of the United States of America, (2006 Feb 21) Vol. 103, No. 8, pp. 2570-5. Electronic Publication: 2006-02-08.
Journal code: 7505876. ISSN: 0027-8424. L-ISSN: 0027-8424.
Report No.: NLM-PMC1413834.
AU Liu Zhi-Jie; Stepanyuk Galina A; Vysotski Eugene S; Lee John; Markova Svetlana V; Malikova Natalia P; Wang Bi-Cheng
AN 2006245287 MEDLINE

L37 ANSWER 9 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN DUPLICATE 5
TI Presenilin mutations linked to familial Alzheimer's disease reduce endoplasmic reticulum and Golgi apparatus calcium levels
SO CELL CALCIUM, (JUN 2006) Vol. 39, No. 6, pp. 539-550.
ISSN: 0143-4160.
AU Pizzo P (Reprint); Zatti G; Burgo A; Giacomello M; Barbiero L; Ghidoni R; Sinigaglia G; Florean C; Bagnoli S; Binetti G; Sorbi S; Fasolato C
AN 2006:638192 SCISEARCH

L37 ANSWER 10 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN DUPLICATE 6
TI Calcium dependence of aequorin bioluminescence dissected by random mutagenesis
SO LUMINESCENCE, (SEP-OCT 2006) Vol. 21, No. 5, pp. 280-281.
ISSN: 1522-7235.
AU Lambolez, B. (Reprint); Tricoire, L.; Tsuzuki, K.
AN 2007:63333 SCISEARCH

L37 ANSWER 11 OF 105 MEDLINE on STN DUPLICATE 7
TI Photoprotein aequorin as a novel reporter for SNP

genotyping by primer extension-application to the variants of mannose-binding lectin gene.
SO Human mutation, (2006 Mar) Vol. 27, No. 3, pp. 279-85. Journal code: 9215429. E-ISSN: 1098-1004. L-ISSN: 1059-7794.
AU Zerefos Panayotis G; Ioannou Penelope C; Traeger-Synodinos Joanne; Dimissianos Gerasimos; Kanavakis Emmanuel; Christopoulos Theodore K
AN 2006090326 MEDLINE

L37 ANSWER 12 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN DUPLICATE 8
TI Obelin mutants with altered colour of light emission as labels for dual-wavelength immunoassay
SO LUMINESCENCE, (SEP-OCT 2006) Vol. 21, No. 5, pp. 271-271. ISSN: 1522-7235.
AU Borisova, V. V. (Reprint); Frank, L. A.; Malikova, N. P.; Stepanyuk, G. A.; Markova, S. V.; Lee, J.; Vysotski, E. S.
AN 2007:63300 SCISEARCH

L37 ANSWER 13 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Luminescent proteins in binding assays
SO Photoproteins in Bioanalysis (2006), 155-178. Editor(s): Daunert, Sylvia; Deo, Sapna K. Publisher: Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim, Germany.
CODEN: 69IPFP; ISBN: 978-3-527-31016-6
AU Roda, Aldo; Guardigli, Massimo; Michelini, Elisa; Mirasoli, Mara; Pasini, Patrizia
AN 2006:1159037 HCAPLUS
DN 146:223628

L37 ANSWER 14 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI Monitoring the expression level of a gene comprises transforming a cell expressing a regulatory biomolecule with a nucleic acid molecule encoding an interaction partner of the biomolecule;
gene expression level monitoring via vector expression in host cell
AU HILLEN W; BERENS C; KLOTZSCHE M
AN 2005-26651 BIOTECHDS
PI EP 1580273 28 Sep 2005

L37 ANSWER 15 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI Monitoring the expression level of a gene in a host cell by modulating a regulatory biomolecule activity by transforming a cell expressing a regulatory biomolecule with a nucleic acid and assessing the expression level of the gene;
for use in gene expression monitoring
AU HILLEN W; KLOTZSCHE M; BERENS C
AN 2005-28936 BIOTECHDS
PI WO 2005093075 6 Oct 2005

L37 ANSWER 16 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI Detecting dynamics of calcium ion in biological system, optically, involves monitoring photons emitted by recombinant calcium-sensitive polypeptide having chemiluminescent protein linked to fluorescent protein, present in system;
transgenic animal model construction production via plasmid expression in host cell for use in disease diagnosis and calcium ion detection
AU BRULET P; ROGERS K; PICAUD S
AN 2005-25434 BIOTECHDS
PI WO 2005078445 25 Aug 2005

L37 ANSWER 17 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI New isolated nucleic acid encoding aequorin or obelin mutant protein capable of binding coelenterazine and molecular

oxygen, and emitting light, useful for multianalyte microanalysis, and for identifying inhibitors of HIV-1 protease;
mutant protein molecule isolation for use in microanalysis and virus enzyme-inhibitor identification
AU DAUNERT S; DEO S K; DIKICI E; ROWE L
AN 2005-29507 BIOTECHDS
PI US 20050214776 29 Sep 2005

L37 ANSWER 18 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI New nucleic acid encoding photoproteins from Clytia gregaria, useful as marker and reporter genes, particularly in screening for pharmaceuticals,;
recombinant protein production via plasmid expression in host cell for use in marker and reporter gene
AU GOLZ S; MARKOVA S; BURAKOVA L; FRANK L; VYSOTSKI E
AN 2005-15281 BIOTECHDS
PI DE 10342670 21 Apr 2005

L37 ANSWER 19 OF 105 MEDLINE on STN DUPLICATE 10
TI Thermostable mutants of the photoprotein aequorin obtained by in vitro evolution.
SO The Journal of biological chemistry, (2005 Oct 7) Vol. 280, No. 40, pp. 34324-31. Electronic Publication: 2005-06-22.
Journal code: 2985121R. ISSN: 0021-9258. L-ISSN: 0021-9258.
AU Tsuzuki Keisuke; Tricoire Ludovic; Courjean Olivier; Gibelin Nathalie; Rossier Jean; Lambolez Bertrand
AN 2005531200 MEDLINE

L37 ANSWER 20 OF 105 MEDLINE on STN DUPLICATE 11
TI Transient receptor potential-like channels are essential for calcium signaling and fluid transport in a Drosophila epithelium.
SO Genetics, (2005 Mar) Vol. 169, No. 3, pp. 1541-52. Electronic Publication: 2005-02-03.
Journal code: 0374636. ISSN: 0016-6731. L-ISSN: 0016-6731.
Report No.: NLM-PMC1449567.
AU MacPherson Matthew R; Pollock Valerie P; Kean Laura; Southall Tony D; Giannakou Maria E; Broderick Kate E; Dow Julian A T; Hardie Roger C; Davies Shireen A
AN 2005162895 MEDLINE

L37 ANSWER 21 OF 105 MEDLINE on STN DUPLICATE 12
TI Bioluminescence resonance energy transfer from aequorin to a fluorophore: an artificial jellyfish for applications in multianalyte detection.
SO Analytical and bioanalytical chemistry, (2005 Apr) Vol. 381, No. 7, pp. 1387-94. Electronic Publication: 2005-02-25.
Journal code: 101134327. ISSN: 1618-2642.
AU Deo Sapna K; Mirasoli Mara; Daunert Sylvia
AN 2005186632 MEDLINE

L37 ANSWER 22 OF 105 LIFESCI COPYRIGHT 2010 CSA on STN DUPLICATE 13
TI Interchange of aequorin and obelin bioluminescence color is determined by substitution of one active site residue of each photoprotein
SO FEBS Letters [FEBS Lett.], (20050200) vol. 579, no. 5, pp. 1008-1014. ISSN: 0014-5793.
AU Stepanyuk, Galina A; Golz, Stefan; Markova, Svetlana V; Frank, Ludmila A; Lee, John; Vysotski, Eugene S
AN 2007:220464 LIFESCI

L37 ANSWER 23 OF 105 MEDLINE on STN DUPLICATE 14
TI Motilin and erythromycin-A share a common binding site in the third transmembrane segment of the motilin receptor.
SO Biochemical pharmacology, (2005 Sep 15) Vol. 70, No. 6, pp. 879-87.

Journal code: 0101032. ISSN: 0006-2952. L-ISSN: 0006-2952.
AU Xu Luo; Depoortere Inge; Vertongen Pascale; Waelbroeck Magali; Robberecht Patrick; Peeters Theo L
AN 2005431805 MEDLINE

L37 ANSWER 24 OF 105 Elsevier Biobase COPYRIGHT 2010 Elsevier Science B.V. on STN
AN 2005115792 ESBIOBASE
TI Suppression of Pdx-1 perturbs proinsulin processing, insulin secretion and GLP-1 signalling in INS-1 cells
AU Wang, H.; Iezzi, M.; Theander, S.; Antinozzi, P.A.; Gauthier, B.R.; Wollheim, C.B.; Halban, P.A.
CS Wang, H.; Iezzi, M.; Theander, S.; Antinozzi, P.A.; Gauthier, B.R.; Wollheim, C.B. (Dept. of Cell Physiol. and Metab., University Medical Center, 1211 Geneva 4 (CH)); Halban, P.A. (Dept. of Med. Genet. and Development, University Medical Center, Geneva (CH))
EMAIL: Haiyan.Wang@medicine.unige.ch
SO Diabetologia (Apr 2005) Volume 48, Number 4, pp. 720-731, 71 refs.
CODEN: DBTGAJ ISSN: 0012-186X
DOI: 10.1007/s00125-005-1692-8
CY Germany
DT Journal; Article
LA English
SL English
ED Entered STN: 3 Feb 2009
Last updated on STN: 3 Feb 2009

L37 ANSWER 25 OF 105 MEDLINE on STN DUPLICATE 15
TI Effect of inactivating mutations on phosphorylation and internalization of the human VPAC2 receptor.
SO Journal of molecular endocrinology, (2005 Apr) Vol. 34, No. 2, pp. 405-14.
Journal code: 8902617. ISSN: 0952-5041. L-ISSN: 0952-5041.
AU Langer Ingrid; Langlet Christelle; Robberecht Patrick
AN 2005187883 MEDLINE

L37 ANSWER 26 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Spectral tuning of the bioluminescent photoprotein Aequorin
SO Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, United States, March 13-17, 2005 (2005), ANYL-179 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69GQMP
AU Rowe, Laura; Dikici, Emre; Logue, Courtney; Scott, Daniel; Deo, Sapna; Daunert, Sylvia
AN 2005:185996 HCAPLUS

L37 ANSWER 27 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN DUPLICATE 16
TI Pharmacological investigation of the Arg(344)His variant of the human 5-HT3A receptor by radioligand-binding and aequorin-based calcium-influx measurement
SO NAUNYN-SCHMIEDEBERGS ARCHIVES OF PHARMACOLOGY, (FEB 2005) Vol. 371, Supp. [1], pp. R30-R30. MA 120.
ISSN: 0028-1298.
AU Combrink S (Reprint); Kostanian A; Barann M; Bonisch H; Gothert M; Bruss M
AN 2005:751948 SCISEARCH

L37 ANSWER 28 OF 105 LIFESCI COPYRIGHT 2010 CSA on STN
TI Transient Receptor Potential-Like Channels Are Essential for Calcium Signaling and Fluid Transport in a Drosophila Epithelium
SO Genetics, (20050300) vol. 169, no. 3, [np].
ISSN: 0016-6731.
AU MacPherson, Matthew R.; Pollock, Valerie P.; Kean, Laura; Southall, Tony

D.; Giannakou, Maria E.; Broderick, Kate E.; Dow, Julian A. T.; Hardie, Roger C.; Davies, Shireen A.
AN 2007:146194 LIFESCI

L37 ANSWER 29 OF 105 MEDLINE on STN DUPLICATE 17
TI Self-reporting Arabidopsis expressing pH and [Ca2+] indicators unveil ion dynamics in the cytoplasm and in the apoplast under abiotic stress.
SO Plant physiology, (2004 Mar) Vol. 134, No. 3, pp. 898-908.
Journal code: 0401224. ISSN: 0032-0889. L-ISSN: 0032-0889.
Report No.: NLM-PMC389913.
AU Gao Dongjie; Knight Marc R; Trewavas Anthony J; Sattelmacher Burkhard; Plieth Christoph
AN 2004129591 MEDLINE

L37 ANSWER 30 OF 105 MEDLINE on STN DUPLICATE 18
TI [Analysis of the Ca2+ response of mycelial fungi to external effects by the recombinant aequorin method].
Analiz Ca2+-otveta mitselial'nykh gribov na vneshnie vozdeistviia s ispol'zovaniem rekombinantnogo ekvorina.
SO Mikrobiologiia, (2004 Nov-Dec) Vol. 73, No. 6, pp. 734-40.
Journal code: 0376652. ISSN: 0026-3656. L-ISSN: 0026-3656.
AU Kozlova O V; Egorov S Iu; Kupriianova-Ashina F G; Read N; El'-Registan G I
AN 2005060482 MEDLINE

L37 ANSWER 31 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN DUPLICATE 19
TI Analysis of the Ca2+ response of mycelial fungi to external effects by the recombinant aequorin method
SO MICROBIOLOGY, (NOV-DEC 2004) Vol. 73, No. 6, pp. 629-634.
ISSN: 0026-2617.
AU Kozlova O V (Reprint); Egorov S Y; Kupriyanova-Ashina F G; Rid N; El'-Registan G I
AN 2005:71326 SCISEARCH

L37 ANSWER 32 OF 105 MEDLINE on STN DUPLICATE 20
TI Preparation and X-ray crystallographic analysis of the Ca2+-discharged photoprotein obelin.
SO Acta crystallographica. Section D, Biological crystallography, (2004 Mar) Vol. 60, No. Pt 3, pp. 512-4. Electronic Publication: 2004-02-25.
Journal code: 9305878. ISSN: 0907-4449. L-ISSN: 0907-4449.
AU Deng Lu; Markova Svetlana V; Vysotski Eugene S; Liu Zhi-Jie; Lee John; Rose John; Wang Bi-Cheng
AN 2004102833 MEDLINE

L37 ANSWER 33 OF 105 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
TI Structure-based spectral tuning of photoprotein bioluminescence.
SO Luminescence (Chichester), (May 2004) Vol. 19, No. 3, pp. 185. print.
Meeting Info.: 13th International Symposium on Bioluminescence and Chemiluminescence. Yokohama, Japan. August 02-06, 2004.
ISSN: 1522-7235 (ISSN print).
AU Vysotski, E. S.; Stepanyuk, G. A.; Markova, S. V.; Malikova, N. P.; Frank, L. A.; Lee, J.
AN 2005:27543 BIOSIS

L37 ANSWER 34 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI New mutated photoproteins derived from jellyfish photoproteins have increased thermostability or increased luminescence time and are useful as bioluminescent markers, e.g., to detect pathogens;
vector-mediated gene transfer and expression in Escherichia coli, HEK-293 or CHO cell for HIV virus infection diagnosis

AU LAMBOLEZ B; GIBELIN N; BOUROUT G; TRICOIRE L E; COURJEAN O A; TSUZUKI K; ROSSIER J
AN 2003-13579 BIOTECHDS
PI FR 2827292 17 Jan 2003

L37 ANSWER 35 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI Novel recombinant calcium-binding photoprotein useful for producing conjugates which in turn is useful as marker in immunoassay; vector-mediated gene transfer and expression in host cell for recombinant protein production and immunoassay marker
AU INOUYE S
AN 2004-03144 BIOTECHDS
PI US 20030212259 13 Nov 2003

L37 ANSWER 36 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Engineering aequorin variants with improved bioluminescence for high-throughput screening of calcium ion flux in cell
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2
AN 2003:796734 HCAPLUS
DN 139:287962

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003082904	A2	20031009	WO 2003-US7979	20030314
WO 2003082904	A3	20040311		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003224694	A1	20031013	AU 2003-224694	20030314

L37 ANSWER 37 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Mutant photoproteins with improved thermostability or luminescence lifetime, their production with recombinant cells, and their uses in bioassays
SO PCT Int. Appl., 184 pp.
CODEN: PIXXD2
IN Lambolez, Bertrand; Gibelin, Nathalie; Bourout, Gaelle; Tricoire, Ludovic Eric; Courjean, Olivier Arsene; Tsuzuki, Keisuke; Rossier, Jean
AN 2003:58119 HCAPLUS
DN 138:119118

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003006497	A2	20030123	WO 2002-FR2492	20020712
WO 2003006497	A3	20040122		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
FR 2827292	A1	20030117	FR 2001-9293	20010712

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CA 2455542 A1 20030123 CA 2002-2455542 20020712
AU 2002333989 A1 20030129 AU 2002-333989 20020712
EP 1404711 A2 20040407 EP 2002-784875 20020712
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
US 20050130262 A1 20050616 US 2005-484380 20050131

L37 ANSWER 38 OF 105 MEDLINE on STN DUPLICATE 22
TI A comparative functional analysis of plasma membrane Ca2+ pump isoforms in intact cells.
SO The Journal of biological chemistry, (2003 Jul 4) Vol. 278, No. 27, pp. 24500-8. Electronic Publication: 2003-04-25.
Journal code: 2985121R. ISSN: 0021-9258. L-ISSN: 0021-9258.
AU Brini Marisa; Coletto Luisa; Pierobon Nicola; Kraev Natasha; Guerini Danilo; Carafoli Ernesto
AN 2003316372 MEDLINE

L37 ANSWER 39 OF 105 MEDLINE on STN DUPLICATE 23
TI Phot1 and phot2 mediate blue light-induced transient increases in cytosolic Ca2+ differently in Arabidopsis leaves.
SO Proceedings of the National Academy of Sciences of the United States of America, (2003 Jul 8) Vol. 100, No. 14, pp. 8583-8. Electronic Publication: 2003-06-23.
Journal code: 7505876. ISSN: 0027-8424. L-ISSN: 0027-8424.
Report No.: NLM-PMC166272.
AU Harada Akiko; Sakai Tatsuya; Okada Kiyotaka
AN 2003340221 MEDLINE

L37 ANSWER 40 OF 105 MEDLINE on STN DUPLICATE 24
TI Violet bioluminescence and fast kinetics from W92F obelin: structure-based proposals for the bioluminescence triggering and the identification of the emitting species.
SO Biochemistry, (2003 May 27) Vol. 42, No. 20, pp. 6013-24.
Journal code: 0370623. ISSN: 0006-2960. L-ISSN: 0006-2960.
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AN 2003281446 MEDLINE

L37 ANSWER 41 OF 105 MEDLINE on STN DUPLICATE 25
TI NorpA and itpr mutants reveal roles for phospholipase C and inositol (1,4,5)- trisphosphate receptor in Drosophila melanogaster renal function.
SO The Journal of experimental biology, (2003 Mar) Vol. 206, No. Pt 5, pp. 901-11.
Journal code: 0243705. ISSN: 0022-0949. L-ISSN: 0022-0949.
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AN 2003148219 MEDLINE

L37 ANSWER 42 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Multiple signalling pathways connect chemoattractant receptors and calcium channels in Dictyostelium
SO Journal of Muscle Research and Cell Motility (2003), Volume Date 2002, 23(7-8), 853-865
CODEN: JMRMD3; ISSN: 0142-4319
AU Nebl, Thomas; Kotsifas, Martha; Schaap, Pauline; Fisher, Paul R.
AN 2003:484864 HCAPLUS
DN 139:377678

L37 ANSWER 43 OF 105 MEDLINE on STN DUPLICATE 26
TI Spectral tuning of obelin bioluminescence by mutations

of Trp92.
SO FEBS letters, (2003 Nov 6) Vol. 554, No. 1-2, pp. 184-8.
Journal code: 0155157. ISSN: 0014-5793. L-ISSN: 0014-5793.
AU Malikova Natalia P; Stepanyuk Galina A; Frank Ludmila A; Markova Svetlana V; Vysotski Eugene S; Lee John
AN 2003519362 MEDLINE

L37 ANSWER 44 OF 105 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
TI MOTILIN AND ERYTHROMYCIN-A SHARE A COMMON BINDING SITE IN THE THIRD TRANSMEMBRANE SEGMENT OF THE MOTILIN RECEPTOR. .
SO Digestive Disease Week Abstracts and Itinerary Planner, (2003) Vol. 2003, pp. Abstract No. S1010. e-file.
Meeting Info.: Digestive Disease 2003. FL, Orlando, USA. May 17-22, 2003. American Association for the Study of Liver Diseases; American Gastroenterological Association; American Society for Gastrointestinal Endoscopy; Society for Surgery of the Alimentary Tract.
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AN 2003:580756 BIOSIS

L37 ANSWER 45 OF 105 NTIS COPYRIGHT 2010 NTIS on STN
TI Crystal and Solution Structure of the Photoprotein Obelin. Final rept. 12 Mar 1999-31 Dec 2002.
NR ADA407919/XAB
5p; 17 Oct 2002
PD 17 Oct 2002
AU Lee, J.
AN 2003(07):00216 NTIS

L37 ANSWER 46 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI Identifying nucleic acid encoding divalent cation transporters comprises exposing host cell with mitochondrion having cation-sensitive indicator contacted with construct encoding transporter to cation and detecting signal;
vector-mediated gene transfer and expression in yeast host cell for recombinant protein production
AU PFEIFFER D R; MURPHY A N; JUNG D W; BRADSHAW P C
AN 2002-08394 BIOTECHDS
PI WO 2002002816 10 Jan 2002

L37 ANSWER 47 OF 105 MEDLINE on STN DUPLICATE 28
TI A small sequence in the third intracellular loop of the VPAC(1) receptor is responsible for its efficient coupling to the calcium effector.
SO Molecular endocrinology (Baltimore, Md.), (2002 May) Vol. 16, No. 5, pp. 1089-96.
Journal code: 8801431. ISSN: 0888-8809. L-ISSN: 0888-8809.
AU Langer Ingrid; Vertongen Pascale; Perret Jason; Waelbroeck Magali; Robberecht Patrick
AN 2002243478 MEDLINE

L37 ANSWER 48 OF 105 MEDLINE on STN DUPLICATE 29
TI Multiple signalling pathways connect chemoattractant receptors and calcium channels in Dictyostelium.
SO Journal of muscle research and cell motility, (2002) Vol. 23, No. 7-8, pp. 853-65.
Journal code: 8006298. ISSN: 0142-4319. L-ISSN: 0142-4319.
AU Nebl Thomas; Kotsifas Martha; Schaap Pauline; Fisher Paul R
AN 2003412654 MEDLINE

L37 ANSWER 49 OF 105 MEDLINE on STN DUPLICATE 30

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SO Biochemical Society transactions, (2002 Aug) Vol. 30, No. 4, pp. 447-50. Ref: 23
Journal code: 7506897. ISSN: 0300-5127. L-ISSN: 0300-5127.
AU Langer I; Vertongen P; Perret J; Waelbroeck M; Robberecht P
AN 2002438613 MEDLINE

L37 ANSWER 50 OF 105 MEDLINE on STN DUPLICATE 31
TI Cysteine-free mutant of aequorin as a photolabel in immunoassay development.
SO Bioconjugate chemistry, (2002 Mar-Apr) Vol. 13, No. 2, pp. 269-75.
Journal code: 9010319. ISSN: 1043-1802. L-ISSN: 1043-1802.
AU Shrestha Suresh; Paeng Insook R; Deo Sapna K; Daunert Sylvia
AN 2002174373 MEDLINE

L37 ANSWER 51 OF 105 MEDLINE on STN DUPLICATE 32
TI Bioluminescence immunoassay for cortisol using recombinant aequorin as a label.
SO Analytical biochemistry, (2002 Jul 15) Vol. 306, No. 2, pp. 204-11.
Journal code: 0370535. ISSN: 0003-2697. L-ISSN: 0003-2697.
AU Mirasoli Mara; Deo Sapna K; Lewis Jennifer C; Roda Aldo; Daunert Sylvia
AN 2002399145 MEDLINE

L37 ANSWER 52 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI New standard substance for the analysis and evaluation of luminescent substances including drugs and foods;
vector-mediated gene transfer and expression in host cell for drug screening
AN 2002-07884 BIOTECHDS
PI JP 2001270899 2 Oct 2001

L37 ANSWER 53 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI Novel secretional luciferase derived from the deep sea luminescent shrimp Oplophorus gracilirostis consists of 19kDa and 35 kDa subunits and is useful as a reporter enzyme;
vector-mediated reporter gene transfer, expression in host cell and antibody for recombinant protein production
AU INOUYE S
AN 2002-07715 BIOTECHDS
PI EP 1156103 21 Nov 2001

L37 ANSWER 54 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI New fusion protein comprising a modified bioluminescent system with a fluorescent molecule covalently linked with a photoprotein, useful for monitoring calcium fluxes or for detecting electrical activity in a group of neural cells;
plasmid pGIA-pG5A-mediated gene transfer and expression in host cell for recombinant mutant green fluorescent protein and aequorin fusion protein production
AU BAUBET V; LE MOUELLIC H; BRULET P
AN 2002-06722 BIOTECHDS
PI WO 2001092300 6 Dec 2001

L37 ANSWER 55 OF 105 WPIDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI New transgenic animal with non-functional gene for melanocortin-4 receptor, useful for identifying specific modulators, potentially used for treating obesity or diabetes
PI WO 2001033956 A1 20010517 (200136)* EN 58[10]
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
W: CA JP US
EP 1241934 A1 20020925 (200271) EN

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
JP 2003525596 W 20030902 (200358) JA 80
IN CHEN A S; CHEN H Y; FEIGHNER S D; FORREST M J; HRENIUK D; MACINTYRE D E; METZGER J M; PALYHA O C; VAN DER PLOEG L H; VAN DER PLOEG L H T

L37 ANSWER 56 OF 105 MEDLINE on STN DUPLICATE 35
TI Bioluminescence immunoassay for thyroxine employing genetically engineered mutant aequorins containing unique cysteine residues.
SO Analytical chemistry, (2001 Jul 15) Vol. 73, No. 14, pp. 3227-33.
Journal code: 0370536. ISSN: 0003-2700. L-ISSN: 0003-2700.
AU Lewis J C; Daunert S
AN 2001428105 MEDLINE

L37 ANSWER 57 OF 105 MEDLINE on STN DUPLICATE 36
TI An immunoassay for Leu-enkephalin based on a C-terminal aequorin-peptide fusion.
SO Analytical chemistry, (2001 Apr 15) Vol. 73, No. 8, pp. 1903-8.
Journal code: 0370536. ISSN: 0003-2700. L-ISSN: 0003-2700.
AU Deo S K; Daunert S
AN 2001355751 MEDLINE

L37 ANSWER 58 OF 105 MEDLINE on STN DUPLICATE 37
TI Role of conservative residue Cys158 in the formation of an active photoprotein complex of obelin.
SO Biochemistry. Biokhimii a, (2001 Sep) Vol. 66, No. 9, pp. 1014-8.
Journal code: 0376536. ISSN: 0006-2979. L-ISSN: 0006-2979.
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AN 2001649854 MEDLINE

L37 ANSWER 59 OF 105 LIFESCI COPYRIGHT 2010 CSA on STN DUPLICATE 38
TI A Putative Two Pore Channel AtTPC1 Mediates Ca super(2+) Flux in Arabidopsis Leaf Cells
SO Plant & Cell Physiology [Plant Cell Physiol.], (20010900) vol. 42, no. 9, pp. 900-905.
ISSN: 0032-0781.
AU Furuichi, T.; Cunningham, K.W.; Muto, S.*
AN 2002:112215 LIFESCI

L37 ANSWER 60 OF 105 MEDLINE on STN DUPLICATE 39
TI C-terminal and n-terminal fusions of aequorin with small peptides in immunoassay development.
SO Bioconjugate chemistry, (2001 May-Jun) Vol. 12, No. 3, pp. 378-84.
Journal code: 9010319. ISSN: 1043-1802. L-ISSN: 1043-1802.
AU Deo S K; Lewis J C; Daunert S
AN 2002010555 MEDLINE

L37 ANSWER 61 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Development and application of a bioluminescent immunoassay using aequorin as a label
SO Bioluminescence & Chemiluminescence, Proceedings of the International Symposium, 11th, Pacific Grove, CA, United States, Sept. 6-10, 2000 (2001), Meeting Date 2000, 357-360. Editor(s): Case, James F. Publisher: World Scientific Publishing Co. Pte. Ltd., Singapore, Singapore.
CODEN: 69CAFI
AU Mirasoli, M.; Deo, S.; Lewis, J. C.; Daunert, S.
AN 2001:843441 HCAPLUS
DN 136:161482

L37 ANSWER 62 OF 105 MEDLINE on STN DUPLICATE 40
TI Structural basis for the emission of violet bioluminescence from a W92F obelin mutant.
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Journal code: 0155157. ISSN: 0014-5793. L-ISSN: 0014-5793.
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AN 2001555689 MEDLINE

L37 ANSWER 63 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Where does manganese bind when it triggers the luminescence of calcium-regulated photoproteins?
SO Bioluminescence & Chemiluminescence, Proceedings of the International Symposium, 11th, Pacific Grove, CA, United States, Sept. 6-10, 2000 (2001), Meeting Date 2000, 79-82. Editor(s): Case, James F. Publisher: World Scientific Publishing Co. Pte. Ltd., Singapore, Singapore.
CODEN: 69CAFI
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DN 136:146735

L37 ANSWER 64 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN
TI Cysteine-free mutant of aequorin: Application in the development of bioluminescence-based immunoassay for digoxin.
SO ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, (1 APR 2001) Vol. 221, Part 1, pp. U74-U74. MA 36-ANYL.
ISSN: 0065-7727.
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L37 ANSWER 65 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Targeting of bioluminescent probes and calcium measurements in different subcellular compartments
SO Calcium Signalling (2nd Edition) (2001), 59-75. Editor(s): Tepikin, Alexei V. Publisher: Oxford University Press, Oxford, UK.
CODEN: 69CMMR; ISBN: 0-19-963848-9
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L37 ANSWER 66 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Cysteine-free mutant of aequorin: Application in the development of bioluminescence-based immunoassay for digoxin
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CODEN: 69FZD4
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AN 2001:197122 HCAPLUS

L37 ANSWER 67 OF 105 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
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SO Abstracts of Papers American Chemical Society, (2001) Vol. 221, No. 1-2, pp. ANYL 36. print.
Meeting Info.: 221st National Meeting of the American Chemical Society. San Diego, California, USA. April 01-05, 2001. American Chemical Society.
CODEN: ACSRAL. ISSN: 0065-7727.
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AN 2001:271378 BIOSIS

L37 ANSWER 68 OF 105 MEDLINE on STN DUPLICATE 41

TI Systematic identification of mutations that constitutively activate the angiotensin II type 1A receptor by screening a randomly mutated cDNA library with an original pharmacological bioassay.
SO Proceedings of the National Academy of Sciences of the United States of America, (2000 Jun 20) Vol. 97, No. 13, pp. 7615-20.
Journal code: 7505876. ISSN: 0027-8424. L-ISSN: 0027-8424.
Report No.: NLM-PMC16594.
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L37 ANSWER 69 OF 105 MEDLINE on STN DUPLICATE 42
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Journal code: 9010319. ISSN: 1043-1802. L-ISSN: 1043-1802.
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AN 2000191511 MEDLINE

L37 ANSWER 70 OF 105 MEDLINE on STN DUPLICATE 43
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Journal code: 0370535. ISSN: 0003-2697. L-ISSN: 0003-2697.
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AN 2000399763 MEDLINE

L37 ANSWER 71 OF 105 MEDLINE on STN DUPLICATE 44
TI Bioluminescence and secondary structure properties of aequorin mutants produced for site-specific conjugation and immobilization.
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Journal code: 9010319. ISSN: 1043-1802. L-ISSN: 1043-1802.
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L37 ANSWER 72 OF 105 MEDLINE on STN DUPLICATE 45
TI Secretagogues modulate the calcium concentration in the endoplasmic reticulum of insulin-secreting cells. Studies in aequorin-expressing intact and permeabilized ins-1 cells.
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L37 ANSWER 73 OF 105 LIFESCI COPYRIGHT 2010 CSA on STN DUPLICATE 46
TI An assessment of the role of intracellular free Ca in E. coli
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ISSN: 0300-9084.
AU Holland, I Barry; Jones, Helen E; Campbell, Anthony K; Jacq, Annick
AN 2007:234116 LIFESCI

L37 ANSWER 74 OF 105 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
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SO Journal of Inorganic Biochemistry, (April 30, 1999) Vol. 74, No. 1-4, pp. 293. print.
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CODEN: JIBIDJ. ISSN: 0162-0134.
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Godwin, Hilary A. [Reprint author]
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L37 ANSWER 75 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN
TI Intrinsic cardiac muscle function, calcium handling and beta-adrenergic responsiveness is impaired in rats with growth hormone deficiency
SO GROWTH HORMONE & IGF RESEARCH, (AUG 1999) Vol. 9, No. 4, pp. 262-271. ISSN: 1096-6374.
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AN 1999:801525 SCISEARCH

L37 ANSWER 76 OF 105 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN DUPLICATE 47
TI Establishment of a new cell line stably expressing aequorin in the endoplasmic reticulum.
SO Jikeikai Medical Journal, (March, 1999) Vol. 46, No. 1, pp. 21-29. print.
CODEN: JMEJAS. ISSN: 0021-6968.
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AN 1999:415006 BIOSIS

L37 ANSWER 77 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI New mutant herpes virus strains for use as vaccines; protease gene inactivation by insertion of non-virus DNA, used in a recombinant vaccine
AU Hippenmeyer P J; Rankin A M; Luckow V A
AN 1998-04850 BIOTECHDS
PI WO 9804286 5 Feb 1998

L37 ANSWER 78 OF 105 WPIDS COPYRIGHT 2010 THOMSON REUTERS on STN
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L37 ANSWER 87 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN
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L37 ANSWER 93 OF 105 NTIS COPYRIGHT 2010 NTIS on STN
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L37 ANSWER 104 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN DUPLICATE 53
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L37 ANSWER 105 OF 105 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
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L37 ANSWER 6 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
AB Luminescent proteins originally isolated from marine or terrestrial organisms have played a key role in the development of several biosensing systems. These proteins have been used in a variety of applications including, immunoassays, binding assays, cell-based sensing, high throughput screening, optical imaging, etc. Among the luminescent proteins isolated, the bioluminescent protein aequorin has been one of the proteins at the forefront in terms of its use in a vast number of biosensing systems. In our laboratory, we have employed aequorin as a label in the development of highly sensitive assays through chemical and genetic modifications from single step anal. of physiol. important mols. in biol. fluids. An important aspect of optimizing these assays for clin. use involves understanding the stability of the various aequorin variants that are available. To this end we have designed several stability studies involving three important aequorin mutants, Mutant S, Mutant 5, and Mutant 53. The cysteine free aequorin, Mutant S, has been the most ubiquitously used aequorin variant in our laboratory because of its increased stability and activity as compared to native aequorin. Mutant 5 and Mutant 53 contain a single cysteine residue at position 5 and 53 in the protein, resp. Because of the presence of a single cysteine residue, Mutant 5 and Mutant 53 both can be site-specifically conjugated. This site specific conjugation capability gives Mutant 5 and Mutant 53 an advantage over native aequorin when developing assays. Addnl. studies optimizing the expression, purification, and charging of aequorin Mutant S were also performed. A thorough understanding of the efficient expression, purification, and storage of these aequorin mutants will allow for the more practical utilization of these mutants in the development of future biosensing systems.

L37 ANSWER 17 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
AB DERWENT ABSTRACT:
NOVELTY - An isolated nucleic acid (N1) hybridizing with a fully defined 861 or 662 base pairs (SEQ ID NO. 3 or 5) sequence given in the specification, under stringent conditions, and encoding a protein capable of binding coelenterazine and molecular oxygen, and emitting light, is new.
DETAILED DESCRIPTION - An isolated nucleic acid (N1) is chosen from: (a) a nucleic acid hybridizing with a fully defined 861 base pairs (SEQ ID NO. 3) sequence given in the specification, under stringent conditions, and encoding a protein capable of binding coelenterazine and molecular oxygen, and emitting light, where (i) the protein has an

isoleucine residue in first position corresponding to position 132 of fully defined 189 amino acid (SEQ ID Number 4) sequence given in the specification; (ii) a non-natural amino acid is incorporated into a position corresponding to 132 of SEQ ID Number 4, during translation of the protein; (iii) the protein has a cysteine residue in a first position corresponding to positions 65, 66, 69, 70, 74 or 76 of SEQ ID Number 4; (iv) the protein has a phenylalanine residue in a first position corresponding to position 132 or 82 of SEQ ID Number 4; (v) the protein has an tyrosine residue in a first position corresponding to position 86 or 16 of SEQ ID Number 4; or (vi) the protein has a tryptophan residue in a first position corresponding to position 82 of SEQ ID Number 4; and (b) a nucleic acid hybridising with a fully defined 662 base pairs (SEQ ID NO. 5) sequence given in the specification, under stringent conditions, and encoding a protein capable of binding coelenterazine and molecular oxygen, and emitting light, where the protein has a serine residue in a first position corresponding to positions 51, 67, or 151, and a serine residue in a second position corresponding to position 75 of a fully defined 165 amino acid (SEQ ID NO. 6) sequence given in the specification. INDEPENDENT CLAIMS are also included for: (1) a kit (K1) comprising the protein encoded by (N1), and a coelenterazine chosen from CTZ i, ip, h, hcp, cp, fcp, f, n and native coelenterazine; (2) an aequorin mutant protein encoded by (N1), where the protein is conjugated to a fluorophore; and (3) identifying (M1) inhibitors of bond-breaking enzymes, preferably HIV-1 protease, comprising: (a) immobilizing a fusion protein encoded by a fusion protein nucleic acid comprising (N1) being operably linked to second nucleic acid encoding a bond-breaking enzyme recognition site, in a first locus and a second locus; (b) contacting the fusion protein with a candidate compound in the presence of the bond-breaking enzyme in first locus; (c) contacting the fusion protein with the bond-breaking enzyme in the second locus; and (d) determining whether there is an increase in the intensity of light emission at the first locus relative to light emission in the second locus.

BIOTECHNOLOGY - Preferred Nucleic Acid: In (N1), the non-natural amino acid is fluorotyrosine or fluorotryptophan, preferably 5-fluoro-l-tryptophan or 3-fluoro-l-tyrosine. Preferred Protein: In the aequorin mutant protein, the flourophore is N-(((2-iodoacetoxy)ethyl)-N-methyl)amino-7-nitrobenz-2-oxa-1,3-diazole (IANBD) ester. Preferred Method: In (M1), the fusion protein comprises a non-natural amino acid. The recognition site is Ser-Glu-Asn-Tyr-Pro-Ile-Val (SEQ ID Number 5).

ACTIVITY - Anti-HIV.

MECHANISM OF ACTION - HIV-1 protease inhibitor; HIV protease inhibitor.

USE - A protein encoded by (N1) useful in identifying inhibitors of bond-breaking enzymes, preferably HIV-1 protease (claimed). HIV-1 protease inhibitors may be used for treating HIV-1 infections. The protein is useful in multianalyte microanalysis, in development of different competitive and non-competitive assays for detecting physiologically important molecules such as peptides, drugs, etc.

ADVANTAGE - The protein encoded by (N1) is capable of emitting light at predictably shifted wavelength when used with various coelenterazine variants, and enables high-throughput screening of biopharmaceuticals.

EXAMPLE - Microorganisms such as Escherichia coli containing a plasmid having genetic information for aequorin were grown in a minimal media supplemented with essential amino acids and vitamins not having amino acid of the analogue that would be incorporated. After the cells were grown to a certain optical density the analogue and the inducer, isopropyl-beta-D-thiogalactopyranoside (IPTG), was added in order to express aequorin. As the protein expression has taken place, the amino acid residues were replaced by the analogue present in the medium. The percent incorporation depends largely on the type and nature of amino acid analogue used and can range from 10-75%. The cells were then

harvested by centrifuging and lysed by sonication. The cell debris was separated from the supernatant, and the supernatant was then incubated with different coelenterazine analogues and the emission spectra were noted. Results showed that an emission wavelength of 511 nm was observed, when the supernatant containing protein was incubated with coelenterazine. Thus, the supernatant containing aequorin mutants having non-natural amino acids was obtained.(35 pages)

L37 ANSWER 19 OF 105 MEDLINE on STN DUPLICATE 10
AB Aequorin is a photoprotein that emits light upon binding calcium. Aequorin mutants showing increased intensity or slow decay of bioluminescence were isolated by in vitro evolution combining DNA shuffling and functional screening in bacteria. Luminescence decay mutants were isolated at the first round of screening and carried mutations located in EF-hand calcium binding sites or their vicinity. During in vitro evolution, the luminescence intensity of the population of mutants increased with the frequency of effective mutations whereas the frequency of other amino acid substitutions remained roughly stable. Luminescence intensity mutations neighbored the His-16 or His-169 coelenterazine binding residues or were located in the first EF-hand. None of the selected mutants exhibited an increase in photon yield when examined in a cell-free assay. However, we observed that two mutants, Q168R and L170I, exhibited an increase of the photoprotein lifetime at 37 degrees C that may underlie their high luminescence intensity in bacteria. Further analysis of Q168R and L170I mutations showed that they increased aequorin thermostability. Conversely, examination of luminescence decay mutants revealed that the F149S substitution decreased aequorin thermostability. Finally, screening of a library of random Gln-168 and Leu-170 mutants confirmed the involvement of both positions in thermostability and indicated that optimal thermostability was conferred by Q168R and L170I mutations selected through in vitro evolution. Our results suggest that Phe-149 and Gln-168 residues participate in stabilization of the coelenterazine peroxide and the triggering of photon emission by linking the third EF-hand to Trp-129 and His-169 coelenterazine binding residues.

L37 ANSWER 26 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
AB Aequorin is a photoprotein whose calcium controlled bioluminescent light emission is used as a label in assays and for the determination of calcium concns.
in vivo. Aequorin contains a coelenterazine chromophore which emits bioluminescence of a characteristic wavelength (465 nm) following relaxation from its oxidized state. Variants of the photoprotein aequorin, with shifted emission wavelengths, were prepared in order to enhance the applications of aequorin in bioanal. Here we show that combining four rationally designed aequorin mutants with various chromophore analogs results in significant spectral and half life shifts. Aequorin variants with different emission maxima and half lifes should allow aequorin to be employed in a variety of multi-analyte detection applications.

L37 ANSWER 32 OF 105 MEDLINE on STN DUPLICATE 20
AB Ca(2+)-regulated photoproteins belong to the EF-hand Ca(2+)-binding protein family. The addition of calcium ions initiates bright blue bioluminescence of the photoproteins, a result of the oxidative breakdown of coelenterazine peroxide to coelenteramide. Crystals of the Ca(2+)-discharged W92F mutant of obelin from Obelia longissima have been grown, representing the first crystallization of a photoprotein after the Ca(2+)-triggered bioluminescence. A green fluorescence observed from the crystals clearly demonstrates that

coelenteramide, the bioluminescence product of coelenterazine peroxide, is bound within the protein. The diffraction pattern exhibits tetragonal Laue symmetry. Systematic absences indicate that the space group is either P4(3)2(1)2 or P4(1)2(1)2. The unit-cell parameters are a = b = 53.4, c = 144.0 A. The crystals diffract to 1.9 A resolution.

L37 ANSWER 33 OF 105 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN

L37 ANSWER 35 OF 105 BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
AB DERWENT ABSTRACT:
NOVELTY - A recombinant calcium-binding photoprotein (I) comprising a wild-type or mutant apoprotein having one cysteine residue introduced within the fourth amino acid residue from the amino terminus of the wild-type apoprotein, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a DNA (II) encoding (I) comprising one cysteine residue introduced within the fourth amino acid residue from the amino terminus of the amino acid sequence of wild-type apoprotein having a full defined sequence (S1) of 189 amino acids as given in the specification or its mutant apoprotein; (2) an expression vector (III) comprising (II); (3) a transformed host cell (IV) comprising (III); (4) a conjugate (V) in which a ligand specific for a substance to be detected binds to (I) comprising a wild-type of mutant apoprotein having one cysteine residue introduced with the fourth amino acid residue from the amino terminus of the wild-type apoprotein, through the cysteine residue, in a ratio of 1:1; (5) producing (M1) (V), involves producing by genetically engineering an apoprotein having one cysteine residue introduced within the fourth amino acid residue from the amino terminus of (S1) or its mutant apoprotein, treating the apoprotein with coelenterazine in the presence of molecular oxygen to yield (I), and binding the photoprotein through the introduced cysteine residue to a ligand specific for a substance to be detected, in a ratio of 1:1; and (6) a kit (VI) for carrying out measuring a substance specific for a ligand, featured by comprising (V).

BIOTECHNOLOGY - Preferred Photoprotein: (I) is chosen from aequorin, obelin, clytin, mitrocomin, mnemiopsin and berovin. (I) is present as luminescent substrate coelenterazine or its analog which exhibits the luminescence activity. (I) further comprises an apoprotein having a fully defined sequence (S2) of 192 amino acids as given in the specification, or an apoprotein having (S2) modified by a deletion, substitution or addition of 1 to 5 amino acids such that the sixth cysteine is conserved and the luminescence activity is maintained. Preferred Conjugate: In (V), the ligand specific for a substance to be detected is biotin, avidin, streptavidin, an enzyme, a substrate, an antibody, an antigen, nucleic acid, a polysaccharide, a receptor or a compound capable of binding to any of these. The ligand specific for a substance to be detected binds to (I) comprising an apoprotein having one cysteine residue introduced within the fourth amino acid residue from the amino terminus of (S1) or its mutant apoprotein, through the introduced cysteine residue, in a ratio of 1:1. The ligand specific for a substance to be detected binds to (I) comprising an apoprotein having (S2), or an apoprotein having an amino acid sequence in which (S2) is modified by deletion, substitution or addition of 1 to 5 amino acids such that the sixth cysteine is conserved and luminescence activity is maintained, through the 6th cysteine, in a ratio of 1:1. The ligand specific for a substance to be detected is biotin. Preferred Method: (M1) further involves producing by genetic engineering an apoprotien having (S2) or an apoprotein having modified (S2) in which the amino acid sequence is modified by a deletion, substitution or addition of 1 to 5 amino acids such that the sixth cysteine is conserved and luminescence activity is maintained, treating the apoprotein with coelenterazine in

the presence of oxygen to yield (I), and binding the photoprotein through the sixth cysteine to a ligand specific for a substance to be detected, in a ratio of 1:1.

USE - (V) is useful for measuring a substance specific for a ligand (claimed). (V) is useful as a marker for immunoassay.

EXAMPLE - From expression vector piP-HE with mutant apoaequorin (having an Ala-Asn-Ser sequence instead of valine at the N-terminus of the wild-type apoaequorin) the EcoRI restriction enzyme site (near the N-terminus of the apoaequorin gene) was deleted by PCR to construct piP-HEDELTAE. piP-HELE plasmid and PCR primers such as Cys4-Aq (5'GGCAAGCTTTGTACTAGTGACTTCGACAACCCAAGATGG3') and 630EcoRI-AQ(5'GCC-GAA-TTC-ATC-AGT-GTT-TTA-TTC-AAA3') were used for PCR amplification of the target fragment with a geneAmp PCR reagent kit, followed by isolation of the fragment with a purification kit and digestion with restriction enzymes HindIII and EcoRI to obtain a HindIII-EcoRI fragment with cysteine at the sixth position from the N-terminus of the mutant apoaequorin gene (fourth position from the N-terminus of the wild-type apoaequorin gene). Separately, plasmid piP-HEDELTAE was digested with restriction enzymes HindIII and EcoRI, and the vector end containing the promoter and OmpA signal peptide was isolated. This was linked with the HindIII-EcoRI fragment and the obtained plasmid was used to transform E.coli JM83. Plasmid piP-HE-Cys4 expressing the mutant apoaequorin with cysteine inserted at the sixth position from the N-terminus was isolated from the transformants. The base sequence was determined and confirmed to be the cysteine-inserted apoaequorin (Cys4-apoaequorin). The amino acid sequence of Cys4-apoaequorin had a fully defined sequence of 192 amino acids amino acids as given in the specification. (15 pages)

L37 ANSWER 36 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN

AB Modified apoaequorin polypeptides that exhibit enhanced glowing are provided, as are functional fragments of the polypeptides, and polynucleotides encoding the polypeptides and functional fragments. A modified glowing aequorin photoprotein also is provided. In addition, methods of using the glowing apoaequorins and encoding polypeptides to detect, for example, the presence of calcium ions in a sample, or to identify agents that effect the movement of calcium ions from one compartment to another are provided, as are methods for identifying functional changes in cells associated with changes in calcium ion concns. Claimed cDNA sequences for aequorin were missing at time of publication.

L37 ANSWER 43 OF 105 MEDLINE on STN DUPLICATE 26

AB The Ca(2+)-regulated photoprotein obelin was substituted at Trp92 by His, Lys, Glu, and Arg. All mutants fold into stable conformations and produce bimodal bioluminescence spectra with enhanced contribution from a violet emission. The W92R mutant has an almost monomodal bioluminescence (lambdamax=390 nm) and monomodal fluorescence (lambdamax=425 nm) of the product. Results are interpreted by an excited state proton transfer mechanism involving the substituent side group and His22 in the binding cavity.

L37 ANSWER 87 OF 105 SCISEARCH COPYRIGHT (c) 2010 The Thomson Corporation on STN

AB A three-dimensional structure model was proposed for obelin, a photoprotein from hydroid polyp Obelia longissima. Alignment was applied to transform the amino acid sequence of invertebrate sarcoplasmic Ca2+-binding protein into the sequence of obelin, and the energy of the resulting protein was minimized. The model protein is a compact globule with a hydrophobic core. It has a cavity lined with residues important for photoprotein activity. The volume of the cavity is sufficient for binding the cofactor, implying that it contains the active center of the photoprotein. Several amino acid residues of obelin were

selected for mutational analysis.

L37 ANSWER 88 OF 105 HCAPLUS COPYRIGHT 2010 ACS on STN
AB A model of the 3D structure of obelin-a photoprotein from sea organism Obelia longissima is suggested. Based on a 3D profile search of the compatibility of the sequence of photoproteins with the structure of calmodulin, troponin C, parvalbumin, and sarcoplasmic calcium binding protein (SCBP), the latter was chosen as template for modeling of the 3D structure of photoproteins. After substitution of the amino acid sequence of SCBP to that of obelin according to the alignment of their primary and secondary structures, the model was subjected to some rounds of energy minimization and the model obtained was analyzed. The structure contains a cavity which is lined by residues that have been shown to be important for the bioluminescence of photoproteins. To prove the suggested 3D structure of photoproteins and the suggested binding site for the photoactive compound some residues are proposed for mutational expts.

L37 ANSWER 95 OF 105 MEDLINE on STN DUPLICATE 50
AB Modification studies of the 5 histidine residues in aequorin employing site-directed mutagenesis and diethyl pyrocarbonate suggested that His169 may be the site of binding of molecular oxygen in aequorin. The modification of this residue led to complete loss of activity, whereas modification of the remaining 4 histidine residues yielded mutant aequorins with varying bioluminescence activities.

L37 ANSWER 105 OF 105 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN

=> fil .becpat

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	282.40	282.62

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-3.40	-3.40

FILES 'BIOTECHDS, HCAPLUS, WPIDS' ENTERED AT 15:34:37 ON 04 FEB 2010

3 FILES IN THE FILE LIST

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FILE 'BIOTECHDS'
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23441 PRY<=2006
(PRY<=2006)
L38 2 (L4 OR L16) AND WO/PC AND PRY<=2006

FILE 'HCAPLUS'
278570 WO/PC
721533 PRY<=2006
L39 2 (L7 OR L19) AND WO/PC AND PRY<=2006

FILE 'WPIDS'
489584 WO/PC
1822686 PRY<=2006
L40 4 (L11 OR L23) AND WO/PC AND PRY<=2006

TOTAL FOR ALL FILES
L41 8 (L12 OR L24) AND WO/PC AND PRY<=2006

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L42           4 DUP REM L41 (4 DUPLICATES REMOVED)

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L42  ANSWER 1 OF 4  WPIDS COPYRIGHT 2010       THOMSON REUTERS on STN
TI   Identifying substances that modulate nitric oxide release comprises
     contacting a test substance with a mixture of nitric oxide producer cells
     and detector cells having a reporter gene construct for detecting nitric
     oxide
PI   DE 102006038942 A1 20080221 (200818)* DE  17[6]
     WO 2008019783   A1 20080221 (200818)  DE                              <--
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             TZ UG ZM ZW
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             MN MW MX MY MZ NA NG NI NO NZ OM PG PH PL PT RO RS RU SC SD SE SG
             SK SL SM SV SY TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
IN   STRAYLE J

L42   ANSWER 2 OF 4  BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI    New stable recombinant stem cell that expresses an apophotoprotein and
      produces a bioluminescent signal in the presence of a suitable
      chromophore, useful for in vitro testing of toxicity and/or teratology of
      a substance;
         involving transgenic animal production expressing a apophotoprotein,
         useful for a drug screening application
AU    CAINARCA S; NUCCI C; CORAZZA S; LOHMER S
AN    2007-18390  BIOTECHDS
PI    WO 2007080622 19 Jul 2007

L42   ANSWER 3 OF 4  BIOTECHDS COPYRIGHT 2010 THOMSON REUTERS on STN
TI    New non-human transgenic animal, useful for bio-imaging studies, for
      crossing with pharmacological relevant animal models, or for in vivo
      testing of toxicity and/or teratology of a substance;
         involving trangenic mouse construction, useful for a transplantation
         experiment and as an animal model for a drug screening application
AU    NUCCI C; CORAZZA S; LOHMER S
AN    2007-18389  BIOTECHDS
PI    WO 2007080621 19 Jul 2007

L42  ANSWER 4 OF 4  WPIDS COPYRIGHT 2010       THOMSON REUTERS on STN
TI   New nucleic acid encoding variant of aequorin, useful
     e.g. as reporter gene and as dye, has much longer luminescent lifetime
     than the parent protein, also new encoded proteins
PI   DE 102005022146 A1 20061123 (200701)* DE  22[5]
     WO 2006122650   A2 20061123 (200701)  DE                              <--
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             UG ZM ZW
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             NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN
             TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
     EP 1881992      A2 20080130 (200810)  DE
          R: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV
             MC NL PL PT RO SE SI SK TR
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     TW 2007016177   A  20070501 (200934)  ZH
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IN   FRAME L; GOLZ S; MARKOVA S; STEPANYUK G A; VYSOTSKI E


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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    22.75     305.37

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00      -3.40

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